

WHAT IS CLAIMED IS (for US, CN, TW):

1. A metallic porous body comprising:

a number of protrusions formed on obverse and reverse sides of a metal sheet so as to protrude alternately with one another; each of the protrusions being formed into an angular-truncated-pyramidal shape so that an area of an upper-side bottom thereof is smaller than an area of lower-side bottom thereof;

wherein an opening portion having a shape as a polygon in a plan view and punched out in the direction from the upper-side bottom to the lower-side bottom is formed in the upper-side bottom of each protrusion, and

a vertical distance (d) between the upper-side bottom on the obverse side and the upper-side bottom on the reverse side, and a height (e) of a punched portion have a relation: $0.3 < e/d < 0.9$.

2. A metallic porous body having a large number of independent opening portions comprising:

a number of protrusions formed on obverse and reverse sides of a metal sheet so as to protrude alternately with one another; each of the protrusions being formed into a rhombic-truncated-pyramidal shape so that an area of an upper-side bottom thereof is smaller than an area of lower-side bottom thereof;

wherein an opening portion having a shape as a rhomboid

in a plan view and punched in the direction from the upper-side bottom to the lower-side bottom is formed in the upper-side bottom of each protrusion,

the opening portion includes a rhombic-pyramidal small
5 concave portion which is concavely formed in a central
portion of the upper-side bottom, and a cross-throwing-knife
shaped opening directed to four corner portions of the upper-
side bottom in a central portion of the small concave portion,
the small concave portion being formed into a petal-like
10 shape downwardly spreading with four petal-shaped pieces, and
an extension direction of one of two diagonal lines
individually connecting between mutually opposing apexes of
the rhomboid of the protrusion conforms to the direction of
the long side of the metallic porous body.

15 3. A metallic porous body having a large number of
independent opening portions comprising:

a number of protrusions formed on obverse and reverse
sides of a metal sheet so as to protrude alternately with one
another; each of the protrusions being formed into a
20 triangular-truncated-pyramidal shape so that an area of an
upper-side bottom thereof is smaller than an area of lower-
side bottom thereof;

wherein an opening portion having a shape as a triangle
in a plan view and punched in the direction from the upper-
25 side bottom to the lower-side bottom is formed in the upper-

side bottom of each protrusion,

the opening portion includes a triangular-pyramidal small concave portion which is concavely formed in a central portion of the upper-side bottom, and a triangular-throwing-knife shaped opening directed to three corner portions of the upper-side bottom in a central portion of the small concave portion, the small concave portion being formed into a petal-like shape downwardly spreading with three petal-shaped pieces, and

an extension direction of one side of the triangle of the protrusion conforms to the direction of the long side of the metallic porous body.

4. The metallic porous body according to claim 2, wherein a vertical distance (d) between the upper-side bottom on the obverse side and the upper-side bottom on the reverse side, and a height (e) of a punched petal portion have a relation: $0.3 < e/d < 0.9$.

5. The metallic porous body according to claim 3, wherein a vertical distance (d) between the upper-side bottom on the obverse side and the upper-side bottom on the reverse side, and a height (e) of a punched petal portion have a relation: $0.3 < e/d < 0.9$.

6. The metallic porous body according to claim 1, wherein a thickness of the metal sheet is ranged from 10 to 50 μm .

7. The metallic porous body according to claim 2,
wherein a thickness of the metal sheet is ranged from 10 to
50 μm .

8. The metallic porous body according to claim 3,
5 wherein a thickness of the metal sheet is ranged from 10 to
50 μm .

9. The metallic porous body according to claim 1,
wherein a thickness of the metallic porous body including the
protrusions is ranged from 0.06 to 1.2 mm.

10 10. The metallic porous body according to claim 2,
wherein a thickness of the metallic porous body including the
protrusions is ranged from 0.06 to 1.2 mm.

11. The metallic porous body according to claim 3,
wherein a thickness of the metallic porous body including the
15 protrusions is ranged from 0.06 to 1.2 mm.

12. The metallic porous body according to claim 1,
wherein the metal sheet has a unit weight ranged from 50 to
450 g/m^2 .

13. The metallic porous body according to claim 2,
20 wherein the metal sheet has a unit weight ranged from 50 to
450 g/m^2 .

14. The metallic porous body according to claim 3,
wherein the metal sheet has a unit weight ranged from 50 to
450 g/m^2 .

25 15. The metallic porous body according to claim 1,

wherein an angle between a portion punched downwardly of the protrusion and a flat portion of the upper-side bottom is greater than 0° and smaller than 90° .

16. The metallic porous body according to claim 2,
5 wherein an angle between a portion punched downwardly of the protrusion and a flat portion of the upper-side bottom is greater than 0° and smaller than 90° .

17. The metallic porous body according to claim 3,
10 wherein an angle between a portion punched downwardly of the protrusion and a flat portion of the upper-side bottom is greater than 0° and smaller than 90° .

18. The metallic porous body according to claim 1,
wherein the metallic porous body is pressed by feeding a rectangle-shaped planar metal sheet having short sides and
15 long sides along the direction of the long side into an opposing gap of a pair of embossing rollers.

19. The metallic porous body according to claim 2,
wherein the metallic porous body is pressed by feeding a rectangle-shaped planar metal sheet having short sides and
20 long sides along the direction of the long side into an opposing gap of a pair of embossing rollers.

20. The metallic porous body according to claim 3,
wherein the metallic porous body is pressed by feeding a rectangle-shaped planar metal sheet having short sides and
25 long sides along the direction of the long side into an

opposing gap of a pair of embossing rollers.